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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/783,104

**Applicant(s)**

KAHN ET AL.

**Examiner**

ROBERT HANCE

**Art Unit**

2421

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,5 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-3,6-13,15-29 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

2. Claim 4 is objected to because of the following informalities: at line 11, the phrase "the acquired module tuning" lacks proper antecedent basis. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 10, 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of the OpenCable HOST-POD Interface Specification OC-SP-HOSTPOD-IF-I08-011221 (hereinafter the HOST-POD Interface Specification).

**As to claim 1** AAPA discloses a method for use in a cable television receiver to switch from a non-module tuning mode to a module tuning mode, the method comprising the steps of:

presenting a video program signal selected by a user while in the non-module tuning mode (Paragraph 5); and

detecting a cable tuning module in the cable television receiver (Paragraph 6).

AAPA fails to disclose acquiring module tuning data responsive to the detection of the cable tuning module during presentation of the video program signal while in the non-module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data.

However, in an analogous art, the HOST-POD Interface Specification discloses acquiring module tuning data responsive to the detection of the cable tuning module during presentation of the video program signal while in the non-module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data (Section 11.6 D.6, Pages 126-127 and Figure on page 127 – when a module is first plugged in while the system is on (and can be tuned to a channel – see Initialization Condition 2 on page 126), an initialization process commences. During this process, the host reads the CCST\_CIF from the module, and if the STCI\_IFN is present (i.e. contains the value 0x341) this identifies the module as a tuning module. Therefore the host acquires module tuning data responsive to the detection of the tuning module. After the initialization is complete, the host transitions to the module tuning mode).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of the HOST-POD Interface Specification. The rationale for this modification would have been to ensure

that, before transitioning to use a newly-inserted module, the module is a proper tuning module.

**As to claim 10** AAPA discloses a cable television receiver apparatus having a non-module tuning mode and a module tuning mode, the apparatus comprising:

- a module interface configured to receive a cable tuning module (Paragraphs 5-6);
- a processor coupled to the module interface, the processor configured to present a video program signal selected by a user while in the non-module tuning mode (Paragraphs 2 and 5 – AAPA discloses a STB, which is known in the art to contain processors which control the tuning and program display functionality); and
- detect a module inserted in the module interface (Paragraph 6).

AAPA fails to disclose acquiring module tuning data responsive to the detection of the cable tuning module during presentation of the video program signal while in the non-module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data.

However, in an analogous art, the HOST-POD Interface Specification discloses acquiring module tuning data responsive to the detection of the cable tuning module; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data (Section 11.6 D.6, Pages 126-127 and Figure on page 127 – when a module is first plugged in while the system is on (and can be tuned to a channel – see Initialization Condition 2 on page 126), an initialization process commences. During this process, the host reads the CCST\_CIF from the

module, and if the STCI\_IFN is present (i.e. contains the value 0x341) this identifies the module as a tuning module. Therefore the host acquires module tuning data responsive to the detection of the tuning module. After the initialization is complete, the host transitions to the module tuning mode).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of the HOST-POD Interface Specification. The rationale for this modification would have been to ensure that, before transitioning to use a newly-inserted module, the module is a proper tuning module.

**As to claim 19** AAPA discloses a system for use in a cable television receiver to switch from a non-module tuning mode to a module tuning mode, the method comprising the steps of:

means for presenting a video program signal selected by a user while in the non-module tuning mode (Paragraph 5); and

means for detecting a cable tuning module in the cable television receiver (Paragraph 6).

AAPA fails to disclose means for acquiring module tuning data responsive to the detection of the cable tuning module during presentation of the video program signal while in the non-module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data.

However, in an analogous art, the HOST-POD Interface Specification discloses acquiring module tuning data responsive to the detection of the cable tuning module; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data (Section 11.6 D.6, Pages 126-127 and Figure on page 127 – when a module is first plugged in while the system is on (and can be tuned to a channel – see Initialization Condition 2 on page 126), an initialization process commences. During this process, the host reads the CCST\_CIF from the module, and if the STCI\_IFN is present (i.e. contains the value 0x341) this identifies the module as a tuning module. Therefore the host acquires module tuning data responsive to the detection of the tuning module. After the initialization is complete, the host transitions to the module tuning mode).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of the HOST-POD Interface Specification. The rationale for this modification would have been to ensure that, before transitioning to use a newly-inserted module, the module is a proper tuning module.

**As to claim 26** AAPA discloses a tangible computer readable storage medium including software that is configured to control a computer to implement a method for use in a cable television receiver to switch from a non-module tuning mode to a module tuning mode, the method comprising the steps of:

presenting a video program signal selected by a user while in the non-module tuning mode (Paragraph 5); and

detecting a cable tuning module in the cable television receiver (Paragraph 6).

AAPA fails to disclose acquiring module tuning data responsive to the detection of the cable tuning module during presentation of the video program signal while in the non-module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data.

However, in an analogous art, the HOST-POD Interface Specification discloses acquiring module tuning data responsive to the detection of the cable tuning module during presentation of the video program signal while in the non-module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to a measure of the acquired module tuning data (Section 11.6 D.6, Pages 126-127 and Figure on page 127 – when a module is first plugged in while the system is on (and can be tuned to a channel – see Initialization Condition 2 on page 126), an initialization process commences. During this process, the host reads the CCST\_CIF from the module, and if the STCI\_IFN is present (i.e. contains the value 0x341) this identifies the module as a tuning module. Therefore the host acquires module tuning data responsive to the detection of the tuning module. After the initialization is complete, the host transitions to the module tuning mode).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of the HOST-POD Interface Specification. The rationale for this modification would have been to ensure



that, before transitioning to use a newly-inserted module, the module is a proper tuning module.

5. Claims 2, 11, 13, 20, 22, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and the HOST-POD Interface Specification as applied to claim 1 above, and further in view of Pauley et al., US Patent No. 6,188,448.

**As to claim 2** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the method of claim 1, wherein the switching step comprises the steps of: determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels; and switching from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 11** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the apparatus of claim 10, wherein the processor is further configured to determine if the acquired module tuning data enables at least a predetermined number of channels to be tuned and switches from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 13** the combined system of AAPA, the HOST-POD Interface Specification, and Pauley disclose the apparatus of claim 10, wherein the processor is further configured to calculate a module quality factor based at least in part on a number of channels that may be tuned using the acquired module tuning data and switches from the non-module tuning mode to the module tuning mode automatically responsive to the module quality factor having a value greater than a threshold value (Pauley (col. 5 lines 21-35; Fig. 4 – the second tuner is not used unless it is able to tune at least one channel. The number of channels which a tuner is able to receive is a "quality factor", and only if this quality factor is greater than 1 will the system use that tuner)

**As to claim 20** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose system of claim 19, wherein the switching means comprises the steps of: means for determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels; and means for switching from the non-module tuning mode to the module

tuning mode when the cable television receiver is able to tune at least the predetermined number of channels.

However, in an analogous art, Pauley discloses means for determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

means for switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to "Movie Channel", the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 22** the combined system of AAPA, the HOST-POD Interface Specification, and Pauley disclose the system of claim 19, wherein the switching means comprises:

means for calculating a module quality factor based at least in part on a number of channels that may be tuned using the acquired module tuning data; and

means for switching from the non-module tuning mode to the module tuning mode automatically responsive to the module quality factor having a value greater than a threshold value (Pauley (col. 5 lines 21-35; Fig. 4 – the second tuner is not used unless it is able to tune at least one channel. The number of channels which a tuner is able to receive is a "quality factor", and only if this quality factor is greater than 1 will the system use that tuner)

**As to claim 27** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the tangible computer readable storage medium of claim 26, wherein the switching step comprises the steps of: determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels; and switching from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to "Movie Channel", the system switches from tuner two to tuner one.

In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 29** the combined system of AAPA, the HOST-POD Interface Specification, and Pauley disclose the tangible computer readable storage medium of claim 26, wherein the switching step for implementation by the computer comprises:

calculating a module quality factor based at least in part on a number of channels that may be tuned using the acquired module tuning data; and

switching from the non-module tuning mode to the module tuning mode automatically responsive to the module quality factor having a value greater than a threshold value (Pauley (col. 5 lines 21-35; Fig. 4 – the second tuner is not used unless it is able to tune at least one channel. The number of channels which a tuner is able to receive is a “quality factor”, and only if this quality factor is greater than 1 will the system use that tuner)

6. Claims 3, 12, 21 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of the HOST-POD Interface Specification as applied to claim 1 above, and further in view of Pauley et al., US Patent No. 6,188,448, and further in view of Croy et al., US Patent No 6,040,829.

**As to claim 3** the combined system of AAPA and the HOST-POD Interface Specification disclose the method of claim 1, wherein the cable television receiver is configured to tune channels for viewing by a user (AAPA Paragraph 5).

The combined system of AAPA and the HOST-POD Interface Specification fail to disclose that the switching step comprises the steps of: determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to "Movie Channel", the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface

Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

The combined system of AAPA, the HOST-POD Interface Specification and Pauley fail to disclose soliciting user input to switch from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels; and switching from the non-module tuning mode to the module tuning mode responsive to the solicited user input.

However, in an analogous art, Croy discloses soliciting user input upon insertion of a smart card, where the user input enables the system to use the extra features offered by the smart card (col. 6 lines 1-21 – a user must input a PIN number to use the smart card).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, the HOST-POD Interface Specification and Pauley with the teachings of Croy by only switching to the module mode until after a PIN has been entered. The rationale for this modification would have been to keep unauthorized persons (i.e. children) from viewing programming enabled by an expansion module.

**As to claim 12** the combined system of AAPA and the HOST-POD Interface Specification disclose the apparatus of claim 10, further comprising,



wherein the cable television receiver is configured to tune channels for viewing by a user (AAPA Paragraph 5).

The combined system of AAPA and the HOST-POD Interface Specification fail to disclose that the switching step comprises the steps of: determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

The combined system of AAPA, the HOST-POD Interface Specification and Pauley fail to disclose a solicitation graphic soliciting user input to switch from the non-

module tuning mode to the module tuning mode; and switching from the non-module tuning mode to the module tuning mode responsive to the solicited user input.

However, in an analogous art, Croy discloses soliciting user input upon insertion of a smart card, where the user input enables the system to use the extra features offered by the smart card (col. 6 lines 1-21 – a user is asked by the device to input a PIN number to use the smart card).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, the HOST-POD Interface Specification and Pauley with the teachings of Croy by only switching to the module mode until after a PIN has been entered. The rationale for this modification would have been to keep unauthorized persons (i.e. children) from viewing programming enabled by an expansion module.

The combined system of AAPA, the HOST-POD Interface Specification, Pauley and Croy fail to disclose a solicitation graphic. However, Examiner takes official notice of the fact that solicitation graphics were well known in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined system of AAPA, the HOST-POD Interface Specification, Pauley and Croy and present a user with a solicitation graphic asking for a PIN number to be input. The rationale for this modification would have been to prompt a user, so the user knows when the PIN number should be input.

**As to claim 21** the combined system of AAPA and the HOST-POD Interface Specification disclose the system of claim 19, wherein the cable television receiver is configured to tune channels for viewing by a user (AAPA Paragraph 5).

The combined system of AAPA and the HOST-POD Interface Specification fail to disclose that the switching means comprises the steps of: means for determining if the acquired module tuning data enables the cable television receiver to tune at least a predetermined number of channels.

However, in an analogous art, Pauley discloses means for determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to "Movie Channel", the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

The combined system of AAPA, the HOST-POD Interface Specification and Pauley fail to disclose means for soliciting user input to switch from the non-module

tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels; and means for switching from the non-module tuning mode to the module tuning mode responsive to the solicited user input.

However, in an analogous art, Croy discloses soliciting user input upon insertion of a smart card, where the user input enables the system to use the extra features offered by the smart card (col. 6 lines 1-21 – a user must input a PIN number to use the smart card).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, the HOST-POD Interface Specification and Pauley with the teachings of Croy by only switching to the module mode until after a PIN has been entered. The rationale for this modification would have been to keep unauthorized persons (i.e. children) from viewing programming enabled by an expansion module.

**As to claim 28** the combined system of AAPA and the HOST-POD Interface Specification disclose the tangible computer readable storage medium of claim 28, wherein the cable television receiver is configured to tune channels for viewing by a user (AAPA Paragraph 5).

The combined system of AAPA and the HOST-POD Interface Specification fail to disclose that the switching step comprises the steps of: determining if the acquired

module tuning data enables the cable television receiver to tune at least a predetermined number of channels.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA and the HOST-POD Interface Specification with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

The combined system of AAPA, the HOST-POD Interface Specification and Pauley fail to disclose soliciting user input to switch from the non-module tuning mode to the module tuning mode when the cable television receiver is able to tune at least the predetermined number of channels; and switching from the non-module tuning mode to the module tuning mode responsive to the solicited user input.

However, in an analogous art, Croy discloses soliciting user input upon insertion of a smart card, where the user input enables the system to use the extra features

offered by the smart card (col. 6 lines 1-21 – a user must input a PIN number to use the smart card).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, the HOST-POD Interface Specification and Pauley with the teachings of Croy by only switching to the module mode until after a PIN has been entered. The rationale for this modification would have been to keep unauthorized persons (i.e. children) from viewing programming enabled by an expansion module.

1. Claims 6-7, 15-16, 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) and HOST-POD Interface Specification, as applied to claims 1, 10, 19 and 26 above, and further in view of Pauley, and further in view of Yun, US Pub No 2001/0006404.

**As to claim 6** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the method of claim 1, wherein the acquiring step comprises the step of: acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel.

However, in an analogous art, Yun discloses acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel (Paragraphs 54-56; Fig. 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Yun. The rationale for this modification would have been to obtain all the necessary information in order for a tuner to be able to acquire cable television signals. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The combined system of AAPA, the HOST-POD Interface Specification and Yun fail to disclose that the switching step comprises the step of: switching from the non-module tuning mode to the module tuning mode responsive to the acquisition of the first instance of each table within the set of critical tables.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel). This can only be

the case when the second tuner has acquired a first instance of each table within a set of critical tables, which enable the tuning of at least one channel).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, HOST-POD Interface Specification and Yun with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 7** the combined system of AAPA, the HOST-POD Interface Specification, Yun and Pauley disclose the method of claim 6, wherein the step of acquiring the first instance of each table within the set of critical tables comprises the steps of: acquiring a Carrier Definition Sub-table, the Carrier Definition Sub-table defining actual frequencies of one or more channels; acquiring a Modulation Mode Sub-table, the Modulation Mode Sub-table defining modulation schemes for the one or more channels; acquiring a Defined Channels Map table, the Defined Channels Map defining one or more virtual channels for use by the cable television receiver when in the module tuning mode; and acquiring a Virtual Channels Map table, the Virtual Channels Map table identifying a virtual channel record for each of the defined virtual channels, each virtual channel record identifying an actual frequency defined by the Carrier Definition Sub-table and a modulation scheme defined by the Modulation Mode Sub-table (Yun Paragraphs 54-56; Fig. 8).



**As to claim 15** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the apparatus of claim 10, wherein the processor is configured to acquire a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel.

However, in an analogous art, Yun discloses acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel (Paragraphs 54-56; Fig. 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Yun. The rationale for this modification would have been to obtain all the necessary information in order for a tuner to be able to acquire cable television signals. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The combined system of AAPA, the HOST-POD Interface Specification and Yun fail to disclose switching from the non-module tuning mode to the module tuning mode responsive to the acquisition of the first instance of each table within the set of critical tables.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel). This can only be the case when the second tuner has acquired a first instance of each table within a set of critical tables, which enable the tuning of at least one channel).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, HOST-POD Interface Specification and Yun with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 16** the combined system of AAPA, the HOST-POD Interface Specification, Yun and Pauley disclose the apparatus of claim 15, wherein the set of critical tables comprises a Carrier Definition Sub-table, the Carrier Definition Sub-table defining actual frequencies of one or more channels; a Modulation Mode Sub-table, the Modulation Mode Sub-table defining modulation schemes for the one or more channels; a Defined Channels Map table, the Defined Channels Map defining one or more virtual channels for use by the cable television receiver when in the module tuning mode; and

a Virtual Channels Map table, the Virtual Channels Map table identifying a virtual channel record for each of the defined virtual channels, each virtual channel record identifying an actual frequency defined by the Carrier Definition Sub-table and a modulation scheme defined by the Modulation Mode Sub-table (Yun Paragraphs 54-56; Fig. 8).

**As to claim 23** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the system of claim 19, wherein the acquiring means comprises: means for acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel.

However, in an analogous art, Yun discloses acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel (Paragraphs 54-56; Fig. 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Yun. The rationale for this modification would have been to obtain all the necessary information in order for a tuner to be able to acquire cable television signals. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The combined system of AAPA, the HOST-POD Interface Specification and Yun fail to disclose that the switching means comprises the step of: means for switching from the non-module tuning mode to the module tuning mode responsive to the acquisition of the first instance of each table within the set of critical tables.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel). This can only be the case when the second tuner has acquired a first instance of each table within a set of critical tables, which enable the tuning of at least one channel).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, HOST-POD Interface Specification and Yun with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

**As to claim 31** the combined system of AAPA and the HOST-POD Interface Specification fails to disclose the tangible computer readable storage medium of claim 26, wherein the acquiring step for implementation by the computer comprises the step of: acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel.

However, in an analogous art, Yun discloses acquiring a first instance of each table within a set of critical tables, the set of critical tables enabling the tuning of at least one channel (Paragraphs 54-56; Fig. 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA with the teachings of Yun. The rationale for this modification would have been to obtain all the necessary information in order for a tuner to be able to acquire cable television signals. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The combined system of AAPA, the HOST-POD Interface Specification and Yun fail to disclose that the switching step comprises the step of: switching from the non-module tuning mode to the module tuning mode responsive to the acquisition of the first instance of each table within the set of critical tables.

However, in an analogous art, Pauley discloses determining if acquired tuning data enables a receiver to tune at least a predetermined number of channels; and

switching from a first tuning mode to a second tuning mode when the receiver is able to tune at least a predetermined number of channels (col. 5 lines 21-35; Fig. 4 – A channel map is present for each tuner. When a user changes channels, for example, from channel 15 to “Movie Channel”, the system switches from tuner two to tuner one. In the case when tuner one does not receive any channels, the system will not switch to it. Therefore, switching between tuning modes only occurs when the second tuner receives a predetermined number of channels (at least one channel). This can only be the case when the second tuner has acquired a first instance of each table within a set of critical tables, which enable the tuning of at least one channel).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system of AAPA, HOST-POD Interface Specification and Yun with the teachings of Pauley. The rationale for this modification would have been to ensure that a second tuning mode is only used when it is capable of receiving at least one channel.

2. Claims 8-9, 17-18, 24-25, 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant’s Admitted Prior Art (AAPA) and the HOST-POD Interface Specification as applied to claims 1, 10, 19 and 26 above, and further in view of Inui et al., Japanese Pub No JP 2002-344838 A.

**As to claim 8** the combined system of AAPA and the HOST-POD Interface Specification fail to disclose the method of claim 1, further comprising the step of:

presenting a virtual channel reference number corresponding to a currently tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified with the teachings of Inui et al. by displaying the virtual channel number responsive to switching between tuning modes. The rationale for this modification would have been to alert the viewer as to the virtual channel number after a change in tuning modes. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 9** the combined system of AAPA and HOST-POD Interface Specification fail to disclose the method of claim 1, further comprising the step of: tuning to a virtual channel corresponding to a previously tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified by switching to the virtual

channel corresponding to the presently tuned physical channel upon switching from one tuning mode to another. The rationale for this modification would have been to allow the switch from one tuning mode to another to be seamless and transparent to the viewer. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 17** the combined system of AAPA and the HOST-POD Interface Specification fail to disclose the apparatus of claim 10, further comprising: a presentation device coupled to the processor, wherein the processor is configured to present a virtual channel reference number on the presentation device corresponding to a currently tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified with the teachings of Inui et al. by displaying the virtual channel number responsive to switching between tuning modes. The rationale for this modification would have been to alert the viewer as to the virtual channel number after a change in tuning modes. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as



claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 18** the combined system of AAPA and the HOST-POD Interface Specification fail to disclose the apparatus of claim 10, wherein the processor is configured to tune to a virtual channel corresponding to a previously tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified by switching to the virtual channel corresponding to the presently tuned physical channel upon switching from one tuning mode to another. The rationale for this modification would have been to allow the switch from one tuning mode to another to be seamless and transparent to the viewer. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 24** the combined system of AAPA and the HOST-POD Interface Specification fail to disclose the system of claim 19, further comprising: means for presenting a virtual channel reference number corresponding to a currently tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified with the teachings of Inui et al. by displaying the virtual channel number responsive to switching between tuning modes. The rationale for this modification would have been to alert the viewer as to the virtual channel number after a change in tuning modes. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 25** the combined system of AAPA and HOST-POD Interface Specification fail to disclose the system of claim 19, further comprising means for tuning to a virtual channel corresponding to a previously tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified by switching to the virtual channel corresponding to the presently tuned physical channel upon switching from one tuning mode to another. The rationale for this modification would have been to allow the switch from one tuning mode to another to be seamless and transparent to the viewer. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 32** the combined system of AAPA and the HOST-POD Interface Specification fail to disclose the tangible computer readable storage medium of claim 26, wherein the method implemented by the computer further includes the step of: presenting a virtual channel reference number corresponding to a currently tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified with the teachings of Inui et al. by displaying the virtual channel number responsive to switching between tuning modes. The rationale for this modification would have been to alert the viewer as to the

virtual channel number after a change in tuning modes. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**As to claim 33** the combined system of AAPA and HOST-POD Interface Specification fail to disclose the tangible computer readable storage medium of claim 26, wherein the method implemented by the computer further includes the step of: tuning to a virtual channel corresponding to a previously tuned physical channel responsive to switching from the non-module tuning mode to the module tuning mode.

However, in an analogous art, Inui et al. disclose presenting a virtual channel reference number corresponding to a currently tuned physical channel (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of AAPA as modified by switching to the virtual channel corresponding to the presently tuned physical channel upon switching from one tuning mode to another. The rationale for this modification would have been to allow the switch from one tuning mode to another to be seamless and transparent to the viewer. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

***Allowable Subject Matter***

7. Claims 4, 5 and 14 are allowed.
8. Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HANCE whose telephone number is (571)270-5319. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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